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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/009,738	12/17/2001	Yasuhiko Suzuki	1155-0234P	1181
2292	7590	04/15/2004	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			LEE, RIP A	
			ART UNIT	PAPER NUMBER

1713

DATE MAILED: 04/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

AS

Office Action Summary	Application No. 10/009,738	Applicant(s) SUZUKI ET AL.	
	Examiner Rip A. Lee	Art Unit 1713	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 2, and 5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2 and 5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This office action follows a request for continued examination (RCE) under 37 § C.F.R. 1.114, filed on January 30, 2004. Claims 1, 2 and 5 remain pending. Claim 4 was canceled, and claim 5 is newly presented.

Claim Objections

1. Claim 1 is objected to because of the following informalities: The claim indicates that R¹ and R⁵ or R¹ and R⁶ may be bonded to each other to form an aromatic ring. It is not clear how this is possible given the geometry shown in figure (I). Furthermore, upon reduction, the ring would no longer be aromatic. Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. Claims 1, 2, and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 11-199592.

The patent describes a process for polymerization of olefins using a catalyst that contains transition metals having structures consistent with those described in the present claims (see claims and extensive listing of compounds on pages 12, 14, 15, 17, and 26). The catalyst composition also contains at least one material selected from the group consisting of an organometallic compound, an organoaluminum oxy compound, and a compound that forms an ion pair with the transition metal compound (paragraph [0010]). The reference does not show a specific example of a catalyst comprised of the particular combination of imine-containing complex, organoaluminum, and ionizing cocatalyst.

This point notwithstanding, it is maintained that the skilled artisan would have found it obvious to use an organometallic compound and a compound that forms an ion pair with the transition metal complex because JP 11-199592 states that *at least one* of these species may be used. The combination of organometallic compound and a compound that forms an ion pair with any of the transition metal compounds disclosed therein is especially evident in view of the fact that the examples show that such a combination: example 5, for instance, illustrates use of *i*Bu₃Al in conjunction with [Ph₃C][B(C₆F₅)₄]. Therefore, one concludes that it would have been obvious to one having ordinary skill in the art to arrive at the subject matter of present claim 1 because the patent teaches such an embodiment. That is, the skilled artisan would have found it obvious to arrive at a catalyst comprised of any of the transition metal complexes taught in the reference, including those imine-containing complexes shown on pages 12, 14, 15, 17, and 26, *i*Bu₃Al, and [Ph₃C][B(C₆F₅)₄].

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There is no indication of catalyst activity only because the reference does not show an example of polymerization using a catalyst comprised of an imine-containing complex, $i\text{Bu}_3\text{Al}$, and $[\text{Ph}_3\text{C}][\text{B}(\text{C}_6\text{F}_5)_4]$. This obvious combination results in a catalyst that is essentially the same as that claimed, and therefore, one having ordinary skill in the art would have readily expected such a catalyst would exhibit the same activity as that delineated in present claim 1. Since the PTO can not perform experiments, the burden is shifted to the Applicants to establish an unobviousness difference. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

Regarding claim 2, transition metal complexes in which substituent R^4 is not hydrogen are shown in the patent, and therefore, use of compounds having this structural feature would have been obvious to one skilled in the art. Finally, the subject matter of claim 5 would have been obvious to the routineer because the patent exemplifies group 4 metal complexes throughout the text.

Response to Arguments

5. Applicant's arguments with respect to the rejection of claims under 35 U.S.C. 102(a) as being anticipated by JP 11-199592 have been fully considered. The rejection has been withdrawn.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rip A. Lee whose telephone number is (571)272-1104. The examiner can be reached on Monday through Friday from 9:00 AM - 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached at (571)272-1114. The fax phone number for the organization where this application or proceeding is assigned is (703)872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <<http://pair-direct.uspto.gov>>. Should you have questions on the access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll free).

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April 8, 2004



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